

System Configuration Team (SCT)

Reasonable & Prudent Measure #26

Meeting Notes

November 20, 2003

Greetings and Introductions.

The November 20 meeting of the System Configuration Team was held at the National Marine Fisheries Service offices in Portland, Oregon. The meeting was chaired by Bill Hevlin of NMFS and facilitated by Donna Silverberg and Richard Forester. The agenda and a list of attendees for the meeting are attached as Enclosures A and B. Silverberg led a round of introductions and a review of the agenda.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Ceballos of NMFS at 503/230-5420.

2. FY'04 CRFM Funding and Program Update.

John Kranda said there are no changes to the CRFM spreadsheet since the last SCT meeting. He said the President is expected to sign the appropriations bill as soon as he returns from England. The conference committee agreed to set the FY'04 CRFM appropriation at \$85 million; we're figuring savings and slippage at about 16-18%, which will likely put us at about the \$70 million range. The bottom line is that, within a month or so, we will have FY'04 funds to spend, Kranda said.

Rock Peters added that proposals will be submitted by the end of this month, so by the time of the next meeting, the SCT will have a better cost estimate. Hevlin noted that, on December 10, the Corps will be hosting a meeting to identify those studies they intend to fund in 2004, for both the Portland and Walla Walla Districts. The location of this meeting has not yet been decided; the theater at McNary was one possibility mentioned, although Ron Boyce requested that, if possible, a location closer to Portland be selected. Peters said he will send out notification of the meeting location and agenda once available.

3. Discussion of RSW Development and Installation Schedule at Ice Harbor, Lower Monumental and Little Goose.

Hevlin said he had spoken with Rod Woodin since the last SCT meeting. Rod's comment was that, if the Power Council wants to see this summer spill study, they need to work with Bonneville to get direct funding for that study, Hevlin said.

Facilitator Richard Forester noted that there is a possibility that this issue will be elevated to the IT on December 3; the Federal Executives are also waiting to discuss it on December 12. It is important, then, that we have a clear record of everyone's position on the RSW issue, he said.

Dana Knutsen said the Corps is still in the design phase on the Ice Harbor RSW; we're struggling to meet the December design deadline, he said. The federal executives decision in December will determine if we move forward with a construction contract in 2004, or to delay that contract. In the meantime, we're moving forward with plans and specs, Knutsen said.

Kevin Crum said one of the issues raised at the last SCT meeting had to do with the direction, last year, to look for possible configurational and operational alternatives that would confer similar biological benefits to the status quo BiOp spill operation, but that could be implemented at a lower cost to Bonneville. Crum said he had produced a new version of the paper used in the course of the 2003 discussion, including updated RSW and spill survival data from Lower Granite and Ice Harbor.

The premise, without benefit of data, was that an Ice Harbor RSW could yield biological benefits, in terms of increased survival, at lower cost, Crum said. That presumption was made with the understanding that there would be an opportunity for a thorough review of the 2003 Lower Granite and Ice Harbor survival data before the decision to move forward with Ice Harbor RSW construction was made. That data is now available, said Crum, but now the debate is, what does it mean? It appears that the Lower Granite data are pretty favorable, he said; it is the Ice Harbor data that are somewhat perplexing, in terms of the causes of the injury rate we're seeing. The other factor is that BPA is now estimating annual savings of \$22 million per year from RSW operation, Crum said.

In order to have this structure installed in April 2005, the latest we can advertise the contract is in mid-March 2004, said Crum. We would then get through the bid evaluation process by early June. That's the latest we can actually award the contract if the builder is going to have it in place by April 2005, Crum said. We're currently about a month behind in the design process, he added, which puts everyone under even more pressure.

In response to a question from Russ Kiefer, Crum explained that the savings associated with the RSW would accrue because, with an RSW in place, spill can be concentrated through one or two bays, and reduced from 30 Kcfs-40 Kcfs to about 19 Kcfs, while passing at least the same percentage of fish. The additional water, obviously, would then be used to generate power and revenue. The group devoted a few minutes of discussion to the reasons for Bonneville's

increased savings estimate; Kim Fodrea replied that the estimate is obviously based on the projected future price of power, as well as the spill assumptions. The \$12 million figure that was originally quoted was based on 35 Kcfs spill through the RSW, while the \$22 million savings is based on the 19 Kcfs RSW/training spill assumption.

The discussion then turned to the range of potential survival results at various spill volumes through the RSW, with 19 Kcfs spill at the low end and 35 Kcfs or more at the high end. Steve Rainey cautioned that no one should start counting on savings from spill due to RSW operation – we won't know what, if any, savings will be there until biological research tells us what operation gives us the optimal survival, he said.

The Corps was going to provide a mini decision document covering all of these biological and economic issues at today's meeting, Boyce said – do we have that central document to refer to? Boyce said that, to him, the concern is that the jury is still out on RSW efficacy at Ice Harbor; there is a possibility that the region would be sinking a lot of money into a system that will essentially provide lower spill at a lower gate opening, conditions that traditionally have provided poor survival at Ice Harbor. The risk, to me, is that we will make the wrong decision if we simply push forward with this project before we adequately understand the mechanical reasons for the lower survival at Ice Harbor, Boyce said.

The group discussed how best to proceed with this issue, in terms of teeing it up adequately for IT and Federal Executives discussion. Boyce reiterated that the Corps' summary document on the Ice Harbor RSW would be a useful starting-point for the SCT's presentation to those groups; Crum agreed to provide it, cautioning Boyce that it merely represents the Corps' perspective on this issue, and is far from encyclopedic. Hevlin noted that he has seen Crum's draft document and rewritten it heavily; I don't think it's going to be very useful, because there are so many different perspectives on this issue, he said.

Crum noted that there are three years of spillway survival research available at The Dalles; he said that, to him, that is the logical starting point for the presentation to the IT and executives.

Silverberg asked the other SCT participants to go around the table and state their positions on this issue.

Boyce said there was a good discussion of the relative survival and mortality of fish passing Ice Harbor through bulk spill and through a lower gate opening. It is clear that survival is lower than expected for fish passing through a lower gate opening, he said, and it is possible that that lower spill opening will be used with the RSW at Ice Harbor. It is unclear whether the RSW can provide the survival results we want to see, given that spillway uncertainty, he said. If we don't understand the mechanical reasons why injuries are occurring, he said, there is a chance we'll only make the situation worse by choosing the wrong system. My suggestion is that we go forward with the planned Ice Harbor spillway biological studies in 2004, homing narrowly in on the mechanical injury question at Ice Harbor, rather than pushing hell-bent forward to get an RSW in place in 2005. If we pursue that course, said Boyce, there is a very good chance that we

will make a \$5 million mistake. My preference would be to postpone the decision until the spillway survival and mechanical issue is resolved, Boyce said.

David Wills said the Fish and Wildlife Service echoes ODFW's concern that the region may be moving too far ahead of the information curve, in terms of the reason injury rates are so high at Ice Harbor. Tom Lorz agreed, saying that, from CRITFC's perspective, the RSW is designed to alleviate one hypothesis of what is causing the injury problems at Ice Harbor (the gate opening -- there is no gate opening with the RSW); however, if the actual cause turns out to be something different, it will not address those other issues.

Kiefer said that, in IDFG's opinion, it would make more sense to study bulk spill at Ice Harbor in 2004; IDFG isn't even convinced that there is an unusual survival problem at Ice Harbor, or, if so, whether an RSW would solve that problem better than bulk spill. He said IDFG would prefer to use salmon recovery dollars to increase survival for listed species first, and use them to increase BPA's bottom line later. He added that, if BPA is so desirous of the savings the RSW technology will yield, then they should build the Ice Harbor RSW with their own funds, rather than seeking to use salmon recovery funds for this project. IDFG would not object to this course of action, Kiefer said. Boyce and Lorz said ODFW and CRITFC also concur with IDFG's concerns.

Kim Fodrea said her concern has to do with the idea that cost reductions are intended simply to benefit BPA's bottom line. We want to do what is in the best interests of fish, in terms of improving survival, she said; we also want to do what is in the best interest of fish, by making salmon recovery operations more affordable and sustainable. The fact of the matter is that we are in a regional economic crisis, and BPA is under extreme pressure to lower its costs and rates, she said -- it is in the best interest of the fish to develop an operation that is less costly and more sustainable over the long term.

Hevlin said NOAA Fisheries has a response, from a fish biology and technical standpoint, to some of these issues. We don't want it to appear that we're arguing, he said, but we can't agree completely with the states and tribes until we air some of the technical viewpoint we have. Those viewpoints aren't necessarily all in conflict with the positions of the states and tribes, he said -- they simply provide a slightly different perspective. One thing new, that I heard at the studies review meeting, concerned the last-minute survival through the Lower Monumental spillway study we did in 2003. Overall, spillway survival was low -- 90%. Hevlin described the results of this study through the season, over various flow and spill conditions. What they saw was a big change in survival between the early, low-flow portion of the study and the later, high-flow period (83% during the period of April 7-May 23, 98.7% for May 24-June 5). The gate openings did not change; tailwater elevation and flow through the project are what did change. That was spillway survival, rather than project survival? Boyce asked. Correct, Hevlin replied.

I mention this because a number of people have raised the possibility that the gate openings are the cause of the survival problem, Hevlin said -- perhaps what this suggests is that depth over the flow deflectors is a more critical problem. What this also says, however, is that,

when both flows and gate openings are low, so is survival, said Boyce. Rainey noted that results from the 2002 study at Lower Monumental showed a similar trend; he described the various low and high-flow scenarios implemented at that project in 2002. At Ice Harbor, what we've seen is a pattern under which, as per-gate discharges increase, so does survival, even when tailwater elevations are low and tailrace conditions are more turbulent, he added. Rainey went through some of the anecdotal information from Ice Harbor and Lower Monumental, as well as the various theories about what may be causing the spillway survival problems at these projects. Rainey added that there is a new hydraulic model of Lower Monumental available in Washington State which will allow additional hydraulic testing in 2004, looking at water particle movement through various spill, gate opening and tailrace conditions.

Rainey also described NOAA Fisheries' proposed two-phase study design for 2004; the bottom line, he said, is that we feel that, with the study design we will have in place, and with the additional, detailed hydraulic testing we plan, we will have a very good idea of what is going on at Ice Harbor after 2004. We'll certainly know whether or not we need to lower the flow deflectors at Ice Harbor, Rainey said, although that's a decision that will need to be made regardless of whether we have an RSW in place. It's not a 10-year process, he added -- we should be able to wrap it up after next year. It sounds, then, as though you're recommending that we defer the decision about whether or not to go forward with the Ice Harbor RSW for a year, Hevlin said. Delaying a year would allow us to have bulk spill vs flat spill test results from 2004 at both Lower Monumental and Ice Harbor, Rainey said, which would certainly help inform the RSW design and construction decision.

It sounds, then, as though NOAA Fisheries is coming around to the other salmon managers' position that it would be better to wait a year to advertise the construction contract for an Ice Harbor RSW, Boyce said. Possibly, Hevlin said -- if another year will really help clear up what will be the most successful RSW design, we would be willing to consider that.

I guess my question is, what might we learn that would alter the fundamental design of the RSW, which is a pretty simple mechanism? said Kranda -- what is the risk of going forward with the RSW project and spending the money in 2004, other than the risk that next year's data may indicate that an RSW should not be a part of the solution at Ice Harbor? My belief is that, if it is a mechanical problem causing the injury and mechanical problems at Ice Harbor, we should be able to find it and correct it, as we are with the training walls at The Dalles, Rainey said. But the real question is, how will the additional information we get in 2004 inform the RSW design? Hevlin said. Crum said that, in his opinion, most of the mechanical issues under investigation are separate from the RSW question -- if, for example, it turns out that the flow deflectors need to be lowered. In other words, said Ken Barnhart, it does not seem likely that the information gathered through the 2004 survival studies will actually alter the RSW design.

It was further observed that the lower spill volumes that may result from RSW operation would not result in lower tailwater elevations (and lesser depths over the flow deflectors) at Ice Harbor -- total river discharge would be the same.

Boyce suggested that it probably makes sense to wrap up this discussion for today,

because it sounds, to him, as though the action agencies have already made up their minds to move forward with the Ice Harbor RSW contract in 2004. Kranda raised another question – what is the risk if the RSW is installed before the 2004 biological information is available? Is it that the RSW will not ultimately be a part of the solution at Ice Harbor, and the \$22 million or so it would cost would be wasted? Is it that the RSW will need to be modified or retrofitted in response to that information? At this point, we feel the RSW will be a part of the solution at Ice Harbor, Rainey said -- in other words, that it will work. Any changes made in response to the 2004 biological testing results will likely be made downstream of the RSW, Rainey added.

So if we can agree that the RSW is likely to be a part of the future solution at Ice Harbor, and that it is unlikely to be substantially modified in response to 2004 biological testing results, what's the downside of going forward with design and construction of the Ice Harbor RSW in 2004? Kranda asked. On the other hand, what's the downside of waiting a year, from a biological perspective? Hevlin asked. We have seen very low survival through both Ice Harbor and Lower Monumental under low flow conditions, Barnhart replied – if the RSW technology is a part of the future solution at those projects, the risk is to the fish.

So is there a biological benefit to delaying RSW construction one year? Hevlin asked. It would allow us to answer the question of whether bulk spill will solve the survival problem at Ice Harbor, if that problem really does exist, Kiefer replied. We will also have some additional adult return information, he added. Actually, there are no PIT-tagged fish out there waiting to answer the adult return question, Crum replied – we don't know whether those marked fish passed the project on a treatment day of spill, or passed through the turbines or through transportation.

The discussion continued in this vein for some minutes. Ultimately, the group settled on three potential options for resolving the RSW issue:

1. Stay the present course, with Ice Harbor RSW construction in 2004 and installation/operation by the spring of 2005
2. Defer Ice Harbor RSW construction for at least a year and switch the focus to make Little Goose RSW construction the next priority, followed by Lower Monumental RSW construction, then Ice Harbor (the soonest the Little Goose RSW could be operational is the spring of 2006)
3. (Proposed by Kiefer): Continue fasttrack development of the Ice Harbor RSW by 2005, with the understanding that the Little Goose RSW would be operational by 2006 and the Lower Monumental RSW by 2007. Additionally, Kiefer said this compromise would need to include the explicit acknowledgment that improving survival is more important than the cost savings expected to result from RSW installation, but the region anticipates that both would occur.

Barnhart said BPA feels that Ice Harbor should be the next RSW priority; the cost savings from the RSW technology are expected to be less at Little Goose and Lower Monumental, because spill occurs 24 hours at Ice Harbor during both the spring and summer period. Kranda noted that the most expedient path to getting RSWs installed at all four Lower

Snake projects would be to stay the current course and do Ice Harbor next – any other course will delay the process by a year. Fodrea noted that, while she is encouraged by the IDFG proposal, she is concerned about Kiefer's final statement – that survival is more important than cost. That's the philosophy that has guided regional decisionmaking for years, she said, and it has gotten us into a situation where spill levels are very high at most projects – we are finding those spill levels very difficult to sustain, Fodrea said. You're saying, then, that the biological and cost benefits need to be equal? Silverberg asked. That's correct, Fodrea replied. Would Idaho have a problem with the statement that, under your plan, the benefits would accrue to both the biological side and the economic side? Silverberg asked. It would have to be worded carefully, because BPA's financial problems were due to poor business decisions, not BiOp operations, Kiefer replied. That's not the issue we're trying to address here, Silverberg observed.

The group devoted a few minutes of additional discussion to the three RSW options. Ultimately, Forester asked the SCT members to state their positions. Boyce said that, in Oregon's view, RSW construction makes absolutely no sense, biologically, at Ice Harbor. David Wills said the Fish and Wildlife Service would prefer to see RSW construction go forward at Little Goose next, but is concerned about the year's delay such a course of action would impose. He said he will present the information to the USFWS federal representative and let him make the policy judgement. Tom Lorz said CRITFC remains unconvinced that an RSW will resolve the survival issue at Ice Harbor, so at this point, CRITFC is reluctant to recommend that RSW construction proceed on a fast track at that project. In response to a question, Lorz said CRITFC is also concerned about the effects of the Ice Harbor RSW fasttrack on the remainder of the CRFM budget; Kranda assured the group that the decision on the Ice Harbor RSW will not affect the placement of other items within the SCT's CRFM priorities. That makes us feel a little more confident, said Lorz.

In the absence of SCT consensus, it was agreed to present the various options outlined above to the IT for discussion and, hopefully, resolution at the group's December 4 meeting.

4. FFDRWG Updates.

Rebecca Kalamasz provided a report on the McNary 1% study, which was discussed at the most recent FFDRWG meeting. She noted that the proposal had been received from USGS, which contained very high radio-tag sample sizes. We felt, as a group, that it wasn't a good idea to proceed with the radio telemetry work, primarily because of the cost -- \$3.3 million to more than \$10 million, Kalamasz said. We did agree to continue with the gateway dipping; one recommendation from the meeting was to get the seasonal gateway results from the two units that are being operated outside of 1%, she said. Kalamasz added that she had sent out a memo to that effect. She added that a contractor had subsequently submitted a proposal for a reduced-scope PIT-tag study, at a cost of less than \$2 million, so that is still a possibility. The SCT agreed that such a study would be useful and should be pursued, pending review of the proposal specifics. She said she will provide additional information as it becomes available.

5. Juvenile Survival Studies at Bonneville.

Discussion of this agenda item was deferred to the next SCT agenda.

6. B2 Corner Collector Hydraulics and Potential Modifications.

Discussion of this agenda item was deferred to the next SCT agenda.

7. Next SCT Meeting Date.

The next meeting of the System Configuration Team was set for Thursday, December 18. Meeting summary prepared by Jeff Kuechle.